



**EMPLATE**

**for third party submission of information on potential candidates for substitution**

**NON-CONFIDENTIAL**

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## 1. ALTERNATIVE IDENTITY AND PROPERTIES

Formalin is broadly used in Dutch Dairy Industry, especially for claw disinfection to prevent bacteriological dermatitis. In different studies a positive effect has been estimated (e.g. Holzhauer et al., 2008) and the stability of the product in direct contact with manure contaminated claws and legs (Holzhauer et al., 2004). The current advice of The Dutch Animal Health Service, is to apply every other week during two passages of each cow, max. no. of cows passages should not exceed 250.

## 2. TECHNICAL FEASIBILITY

In the Netherlands Formalin (= 37% formaldehyde solution) is officially registered and available for the dairy farmers. It is allowed, if applied properly, for the disinfection of the claws of dairy cattle in footbaths, which are used as walking-through mainly.

## 3. ECONOMIC FEASIBILITY

Formalin is a relative cheap product available product for claw disinfection for dairy farmers. Alternatives are available and proven effective, but at least 10x more expensive than formalin.

## 4. HAZARDS AND RISKS OF THE ALTERNATIVE

The most used alternative in the Netherlands is copper sulphate, which is however **illegal**, toxic for fish and might result in copper overload in the environment (damage of grass roots). So not a real alternative according PT3. Other modern alternatives are mainly based on organic acids and quaternary ammonia compounds, which are completely metabolized after storage in the manure pit (as formalin).

## 5. AVAILABILITY

Availability of alternatives is no problem, but they are 10-fold more expensive.

## 6. CONCLUSION ON SUITABILITY AND AVAILABILITY OF THE ALTERNATIVE

Commercial alternatives are proven effective and available, but have to be applied more frequent and are more expensive.



## **7. OTHER COMMENTS**

Farmers should be warned more about the risk at the moment of preparing their footbaths and to position it not to close to the milking parlour to prevent inhaling of formalin fumes.

## **REFERENCES**

Holzhauser M, Döpfer D, de Boer J and van Schaik G. 2008. Effects of different intervention strategies on the incidence of papillomatous digital dermatitis in dairy cows. Vet Rec. 162:41-6.

Holzhauser M, Sampimon OC and Counotte GH. 2004. Concentration of formalin in walk-through footbaths used by dairy herds. 154: 755-6.

Laven RA and Hunt H. 2002. Evaluation of copper sulphate, formalin and peracetic acid in footbaths for the treatment of digital dermatitis in cattle. Vet Rec. 151: 144-6.

## **APPENDIXES**

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